

KATERINA TANG

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EDUCATION

Cornell University, Ithaca, NY

Ph.D. in Applied Mathematics

Expected 2027

- Committee: C. Lindsay Anderson, Vivek Srikrishnan, and David Bindel

Kenyon College, Gambier, OH

B.A. in Mathematics, minor in German

May 2021

- Valedictorian, *summa cum laude*

RESEARCH EXPERIENCE

Graduate Research Assistant

Srikrishnan Lab, Cornell University, Ithaca, NY

Jan 2023 – Jul 2024

- Applied information-theoretic measures to identify infrastructure bottlenecks in a power grid using simulation data, evaluated the utility of such approaches

Graduate Modeling and Simulation Intern

The Aerospace Corporation, Colorado Springs, CO

Jun – Aug 2022

- Developed algorithms for detecting and monitoring global navigation satellite system signal interference with mentors in the Systems Performance, Estimation & Algorithms Department

Clare Boothe Luce Undergraduate Research Scholar

Kenyon College, Gambier, OH

Jan – Dec 2019

- Developed new analytic tools to study the existence and character of solutions to the Erdős-Straus Diophantine equation

PUBLICATIONS

** denotes equal author contribution*

- D. Kaiser*, **K. Tang***, W. Thompson*, J. G. Young, L. Hébert-Dufresne, N. W. Landry. “Emergent contagion complexity: Disentangling nonlinear mechanisms from correlated heterogeneity,” *in preparation*.
- **K. Tang**, V. Srikrishnan, and J. Kulik. “Bayesian inference of hypergraph structure from scarce and noisy dynamical observations,” *under review*.
- **K. Tang**, M. V. Liu, C. L. Anderson, and V. Srikrishnan. “Identification of pressure points in modern power systems using transfer entropy,” *Cell Rep. Sustain.* **3**, 100660. DOI: 10.1016/j.crsus.2026.100660.

HONORS AND AWARDS

Graduate Student Teaching Award, Cornell Math Department	Fall 2025
The Reginald B. Allen Prize, Kenyon Math Department <i>Awarded to a student who has shown unusual promise in mathematics</i>	Spring 2021
Phi Beta Kappa, member	Fall 2020
Barry M. Goldwater Scholarship	Spring 2020
Pi Mu Epsilon, member	Fall 2018

SELECTED PRESENTATIONS

* denotes poster presentation

- “Emergent complexity of contagion: Correlated heterogeneity in simple contagions mimics complex contagions”, *NetSci*, Boston, MA (2026).
Received Best Student Talk award.
- “Identification of infrastructure pressure points in a decarbonized grid across climatic-technological scenarios,” *Annual Conference of the Society for Decision Making Under Deep Uncertainty*, Denver, CO (2024).
- “Identification of infrastructure pressure points in a decarbonized grid across climatic-technological scenarios,” *AGU Annual Meeting*, Washington, DC (2024).*
- “A clustering-based method for interpretable multi-class scenario discovery,” *MultiSector Dynamics Workshop*, Davis, CA (2023).*
- “Existence and Character of Solutions to the Erdős-Straus Equation,” *Joint Mathematics Meeting*, Denver, CO (2020).*
Received MAA Outstanding Poster award.

TEACHING AND MENTORSHIP EXPERIENCE

Cornell University

- **Graduate Teaching Assistant**, Math 1106 Modeling with Calculus for the Life Sciences
Aug 2026 – Dec 2026
- **Graduate Teaching Assistant**, Math 1900 Introduction to Calculus for Engineers
Jul 2026 – Aug 2026
- **Head Teaching Assistant**, Math 1920 Multivariable Calculus for Engineers
Sep 2025 – May 2026
- **Graduate Teaching Assistant**, Math 1920 Multivariable Calculus for Engineers
Aug 2021 – Dec 2023, Aug 2024 – May 2026
- **Co-director & mentor**, Center for Applied Mathematics First-Year Mentoring Program
Aug 2024 – present

Kenyon College

- **Mentor**, KSTEM Mentoring Program
Aug 2020 – May 2021

- **Founding member and mentor**, Kenyon College Chapter of the Association for Women in Mathematics
Aug 2018 – May 2021
- **Volunteer & staff**, ATHENAS Saturday Science Program
Jan 2019 – Dec 2019

SELECTED COURSEWORK

Cornell University

- Network Systems and Games
- Inverse Problems
- Applied Dynamical Systems
- Probability Theory
- Numerical Methods for Data Science
- Numerical Analysis
- Machine Learning
- Mathematical Modeling

Kenyon College

- Real Analysis
- Abstract Algebra
- Data Analysis
- Data Structures